

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Original Correspondence.

FOREIGN MINING AND METALLURGY.

Paris copper market has been more feeble. Chilean in bars 85 $\frac{1}{2}$ l; ditto in ingots, 87 $\frac{1}{2}$ l; and Corocoro minerals, 92 $\frac{1}{2}$ l per ton; Chilean copper has been in little demand, and quotations have been to a great extent nominal. At Marseilles business has been very quiet; Spanish in plates has made 88 $\frac{1}{2}$ l, and in ingots 90 $\frac{1}{2}$ l per ton. The German copper markets have been quiet. Tin has experienced an advance at Rotterdam; for instance, has made 81 $\frac{1}{2}$ l, and Banca 82 $\frac{1}{2}$ l. The sale of Biliton may be noted at 81 $\frac{1}{2}$ l. There has been a sensible advance in tin at Paris; Banca, delivered at Havre, has made 144 $\frac{1}{2}$ l; Straits, 140 $\frac{1}{2}$ l; and English, delivered at Rouen, 144 $\frac{1}{2}$ l per ton. The German tin markets have been rather feeble. Lead has been declining at Paris; French delivered at Paris, has brought 24 $\frac{1}{2}$ l; Belgian and German 24 $\frac{1}{2}$ l; Spanish, delivered at Havre, 24 $\frac{1}{2}$ l; per ton; English ditto, 24 $\frac{1}{2}$ l; per ton. The German lead markets have been quiet. Zinc has been somewhat declining at Paris. The German markets have been in a somewhat indecisive state, and it is to give even approximate quotations.

Belgian coal trade has not presented any points of very great interest. Colliery proprietors have been doing all in their power to keep prices, while consumers have been exerting themselves to bring them down. The purchase of 20,000 tons of English coal by the French Railway Company has not passed unnoticed in France; the circumstance has been observed, indeed, with a good deal of interest, as it is thought that had Belgian colliery proprietors a more moderate tone one or more of them might have been able to reproduce quotations, which vary considerably according to the conditions upon which business is done. Coke in Belgium to 12 $\frac{1}{2}$ l; per ton, to 2 $\frac{1}{2}$ l; per ton, which, with coal at 17 $\frac{1}{2}$ l; per ton, may be said to be about a normal price. The French Collieries Company will pay, July 1, a first dividend for 1872 at the rate of 1 $\frac{1}{2}$ l; per share. The Herve-Wergifosse Collieries will pay, July 1, a dividend for 1872 at the rate of 2 $\frac{1}{2}$ l; per share. The Val-Benoit Collieries Company will pay, July 1, a dividend for 1872-3, at the rate of 1 $\frac{1}{2}$ l; per share.

Arrivals of coal at Paris have been of late upon a considerable scale. Some deliveries have been made from almost every quarter, and English coal is regaining a serious footing. The directors of the French Railway Company have just purchased 20,000 tons at 17 $\frac{1}{2}$ l; per ton on trucks at Dunkerque, this price including import duties payable. This circumstance will probably excite some thoughtful reflections on the part of the French coal proprietors. French coal consumers begin to assume a defensive attitude; and, for instance, a meeting of industrialists was held, in order to discuss the growing exigencies of colliery proprietors. It is to be expected, the coal question pre-occupies every mind in France, and everyone is endeavouring to provide some remedy for the difficulties which exist. In the Nord committees have been formed by the best means of economising coal. Colliery proprietors exhibit some inclination to open new pits; the Anzin Company, for instance, has commenced a new shaft. The Vendin-les-Bethunes Company has been paying a dividend for 1872 at the rate of 1 $\frac{1}{2}$ l; per share.

Regarding the Belgian iron trade, it may be observed that the works possessing collieries can still make iron upon remunerative conditions, but those which have to buy their supplies of coal at current rates are undecided as to whether they shall re-continue their production or extinguish their furnaces; some establishments in fulfilling old engagements have work assured for some time to come; others have accepted some small unimportant orders, the majority await with anxiety what the future reserves them. Numerous offers of large contracts have been refused by colliery-mills, in consequence of the impossibility of executing orders at remunerative rates. Producers and consumers are in an attitude of expectation, and this causes fluctuations in prices, which are, for the rest, to a great extent nominal. An extension of rails for the Belgian State Railways, to which reference was recently made under this head, has been postponed to 1874. Some writers upon the present condition of the Belgian iron trade attribute the check which affairs have experienced to the falling off in the German demand, but the real difficulty is the extraordinary prices which Belgian industrialists have to pay for raw materials. The Sclassin Blast-Furnaces, Ironworks, and Collieries will pay, July 1, statutory interest upon its shares at the rate of 5 per cent. per annum.

The condition of the French iron trade has experienced no great change since the date of the last report made upon the subject. The situation in affairs has, perhaps, been not quite so great; at the same time, the orders obtained are not of much importance, and they are limited to current requirements. The works are generally engaged for the most part in disposing of old orders, and it is needless to say that this is not a very satisfactory state of affairs. The advertisements of the great French railway companies persist in requesting to accept current quotations with any readiness; but, on the other hand, there is little possibility of a fall occurring in iron before the end of the year. The reduction in the direct exports of iron also occurs in the price of coal, the high rates of which make it impossible for most industrialists to produce more cheaply than they work at a total loss. In the Meurthe-et-Moselle group the pig is quoted at 5 $\frac{1}{2}$ l; per ton, and speckled pig at 6 $\frac{1}{2}$ l; per ton. In the Nord merchants' iron is quoted at 12 $\frac{1}{2}$ l; to 12 $\frac{3}{4}$ l; per ton. The Paris market have not sensibly varied. The Châtillon and Comenay Forges Company at its last meeting ratified a project for the establishment of metallurgical works at Beaumont, in the Garonne. Reports of wrought-iron and plates into France in the first four months of this year were 16,944 tons, or 1631 tons less than in the corresponding period of 1872. The reduction in the direct exports of iron from France in the first four months of this year, as compared with the corresponding period of 1872, was about 6000 tons. A blast-furnace, with large productive power, recently constructed at Marnaval St. Dizier, has been lighted for more than a month; its production when in regular operation is 40 tons

per day. The furnace is the largest in the Champagne group. The heating apparatus is on the Cowper system. The administration of public lands and properties is offering for sale the Chaussade National Forges, at Casne-sur-Loire. During the last two months the Western of France Railway Company has ordered 23,000 tons of steel rails, at the uniform price of 17 $\frac{1}{2}$ l; 14s. per ton, delivered at Batignolles. The contractors for these rails are MM. Schneider and Co. and M. Alphonse Julien. The St. Etienne basin has been rather tried of late. First, we must note the commencement of a strike among the working miners in the neighbourhood of Firminy; and, secondly, we must record a frightful accident in the foundry of MM. Petin, Gaudet, and Co., at St. Chamond. During the running of a large casting at this establishment a terrible explosion occurred. M. Montandon, an engineer, was killed, as well as four workmen. The number of workmen wounded is not yet definitely ascertained.

THE BUNKER HILL GOLD MINE.

Sir,—This mine is situated upon the "Mother Lode," in Amador County, California, within six hours of San Francisco, and ten miles of Latrobe, a station on the Sacramento Valley Railroad. It consists of 11,147 feet in length, by 500 feet in width, on the great "Mother Lode" of California. Hoisting works, with steam-engine, reel, attachments, &c., are upon the mine. All the water-power of Rancheria Creek (sufficient to supply abundance of motive-power for six months in the year) belongs to this company, which is a feature of great value, as the ore is mined and worked for \$4 per ton by water-power, and \$5 per ton by steam. A mill site on the southerly bank of Rancheria Creek, comprising about 10 acres of land; a flume and ditch, which take water from Rancheria Creek to the mill; a twelve-stamp mill, with steam and water power, now being enlarged and improved. The mine is now in operation, and is situated in near proximity to the Keystone, Hayward-Amador, and other celebrated properties, with neighbouring mines on each side, now profitably at work.

No mine on the "Mother Lode" has failed to be remunerative which has been worked to the depth of 400 feet: 300,000,000l. in gold has been produced from the Mother Lode between 1848 and 1872. Nowhere is that lode richer or more productive than in the locality of the Bunker Hill Mine. The Hayward-Amador has produced 1,800,000l. in 14 years, one-half of that amount being net profit; and the Keystone has returned an average of 140,000l. per annum for several years, two-thirds of that amount being net profit. (Within 1300 ft. of this mine is the Bunker Hill Mine.)

The Registrar and Receiver of the United States Land Office, in an official document, have pronounced this portion of the Mother Lode (which includes the Bunker Hill Mine) to be "perhaps the richest half section (being 1 mile by 1 mile in extent) of mineral land yet discovered;" and in the same document estimate the improvements on the Bunker Hill Mine at \$200,000 (40,000l.). The United States official report to Congress, in 1868, uses the following language: "The Mother Lode is in many respects the most remarkable metalliferous vein in the world."

Professor Carr (of the University, California) personally examined the Bunker Hill Mine, and reports as follows:—"The Bunker Hill surface explorations demonstrate that the claim includes at least two pay chimneys, the aggregate length of which is nearly equal to that of the Hayward-Amador, and larger than any other in the county." During the past year the mine has been extensively developed, many thousands of tons of very valuable ore have been disclosed, and the mill has been recently started with this extraordinary result, that the ore in the mill is yielding from 16 to 33 per cent. more than the ore from the famous Sierra Buttes gold mine, which is owned and organised in England, and justly commands the largest premium of any Californian gold mine in the London market.

The Bunker Hill Mine is about to be organised as an English company, and the following summary exhibits the estimated profits of the enterprise:—

Estimated yield of quartz per ton.....	£7
Expense per ton.....	1
Estimated profit per ton.....	£6
Estimated production per day with 20 stamps.....Tons 40	
Net yield per day.....	£240

Equal to about 70,000l. per annum, being more than 24 per cent. per annum on the proposed capital of 250,000l. This is averaging the ore at the actual mill yield, but if the ore be taken as of the value shown by the tests made in London by Messrs. Johnson, Matthey, and Co.—viz., at 94 $\frac{1}{2}$ l. to 397 $\frac{1}{2}$ l. per ton—the profits will be much greater.

—ANGLO-AMERICAN.

MINERAL WEALTH OF UTAH.

Sir,—I have been a resident of Utah for nearly 20 years, and during that time have been actively engaged in business which has caused me to travel over the mountains and through the settlements, and in portions of the adjoining territories. I have been careful in gathering information respecting the general wealth of the country, and I have no hesitation in saying that Utah and those portions of the territories adjoining through which I have passed contain an abundance of mineral wealth, consisting of silver, lead, copper, bismuth, and some cinnabar, iron, coal, and fire-clay, also blacklead, native sulphur, alum, borax, nitrate of potash, sal ammoniac, carbonate of soda, and gypsum, but, owing to the difficulty of conveying machinery across mountains in wagons to distances of from 100 to 400 miles, and the amount of capital required to erect suitable works for crushing, smelting, refining, &c., has made capitalists careful as to their investments in the business. And further, the absence of railways has prevented men of moderate means having rock thoroughly tested before undertaking to build suitable works before working the mines; that is to say, if there had been railways running across the country, men of small capital could have conveyed the rock to mills to be crushed and tested, and thereby have known precisely what they were doing while developing the mines.

Copper ore is found in the Tintic district and vicinity of St. George, Southern Utah, also in the northern part of the Territory, all of which contain silver of various amounts; silver mixed with lead is found almost all over the Territory, coal mostly in the mountains east of Salt Lake City, Juab County, Sevier Valley, Iron, and Kane Counties. The other minerals are mostly found in the southern part

of the Territory, commencing at Filmore, about 150 miles south of Salt Lake City. Forty miles north-east of St. George is the town of Kanarra; east and west of the town are large beds of coal of good quality and variety, and very extensive. A few miles north and west are immense deposits of iron ore; on the top of the ground, still west, commences the desert, around and on which are the silver mines of Pinto, or Silver Belt, Clover Valley, Meadow Valley, Pioche, and Star districts, most of which, with the exception of Pioche, are undeveloped. This part of the country is of volcanic nature, and many discoveries supposed to be good mines are, in my opinion, either blow-ups or slides from principal leads; yet there is no doubt of the quality of the mines being good, but it requires men of judgment to know the difference; inexperienced men frequently locate and work to great loss of time and money. Hitherto we have had a number of adventurers who have run all over the country to prospect, with a view of selling mines—or holes in the ground—and have tried to get rich at the expense of others without paying for value received. Such men are always a nuisance to honest residents of the country. And, again, Salt Lake City has been besieged by a set of broken-down politicians, whose friends in Congress have got them appointed as judges, secretaries, &c., for some purpose best known to themselves, who, together with a few lawyers of the same stamp, have all the time been trying to get interests in the mines, and in some instances these judges have, it is firmly believed, sat upon cases wherein they were interested, and to cover up their deed they have kept up the cry of "Brigham Young and the Mormons; they marry all the widows and maidens, and do not give us any chance. Let us hang Brigham Young, and drive away the Mormons," with the idea, no doubt, that they would get all the farms and mines wherein the Mormons were interested for nothing; but, thanks to the Supreme Court of the United States, the actions of these carpet-baggers for the last two years have been disapproved, and their decisions set aside. They have now begun to quarrel among themselves, and a suit is in Court by one of them for the recovery of damages for the non-payment of a note given for the purchase of a judgeship. The Latter-day Saints were the first settlers of the valleys, and have with great labour made the land productive and desirable. They raise wheat, corn, oats, barley, potatoes and vegetables in general, butter, eggs, fruit, and beef, all of which they are willing to sell to the miners at fair prices, without which it would be difficult to work the mines to advantage; for if provisions had to be imported from the Eastern States it would cost too much to make it profitable to work in the mountains. The country is dry and healthy, and suitable for mining purposes, and when we have more railways, personal capitalists, and honest business judges to supply the place of the class before referred to, we shall have one of the safest and best mining countries in the world. But, had the judges and lawyers before named succeeded in carrying out their object in driving away the Mormons, Utah would have soon become an unsafe place for English capital. But so long as they are undisturbed, and remain under the guidance of Brigham Young, Utah is one of the safest places in the world for investment.

It would be useless for me to give you any account of the mines in the vicinity of Salt Lake City, as they are well known in your market. The people are actively engaged in building railroads, and have already completed the Utah Central, distance about 40 miles, and about 40 miles of the Utah Northern, also about 35 or 40 miles of the Utah Southern; the two last named lines are intended to span the Territory, and the work to be continued until completed. In addition to these there are to be a number of side issues or branches running into the canyons, some of which are nearly completed. J. B.

ASSAYING, AND PRACTICAL EXPERIENCE.

Sir,—The question of the existence of gold and silver in a variety of rocks needs no comment. They are found in a great variety of forms, and in numerous qualities of gangue or matrix, and have been the source of anxious enquiry for ages, and in pretty nearly every section of the globe, and still remain the objects of active explorations. Frequently, and where least expected, they, and especially the first-named, crop out and create a furore for more extended and anxious investigation. At the same time, I firmly believe that gold especially escapes more than any other well-known metal the prying eye of the explorer. I am equally persuaded no metal, iron only excepted, is so universally diffused. The question arises how to obtain it profitably when its presence is discovered.

Though in a much minor degree, the existence of silver demands closer investigation. Its concentration is more readily effected still doubtless vast quantities, for want of proper appliances, are daily and hourly discarded amongst debris, and thus entirely lost. Society should, therefore, hail with satisfaction every step taken for the recovery of these noble metals, for however much they may be, theoretically, the root of all evil; as the world is now constituted, few of us would object to possess not only the root, but a much larger share of the trunk, stems, branches, leaves, and fruit. I am led to remark upon this subject by the observations of your correspondent, Mr. J. Walker, who appears to have discovered the arcane of securing the largest amount of gold found to exist in a given quantity of its matrix, and at the same time he is one of the first, out of the pale of the adepts, to acknowledge the benefits derivable to practical men by the refined processes of the assayer. This gentleman, candidly and in good faith, acknowledges that, though hitherto somewhat sceptical of the returns obtained by science upon a limited scale, the results are to be obtained in bulk by proper arrangements. For several weeks past I have been actively engaged in testing experiment against practice—the minutiae of the laboratory against the extended operations of machinery—and have confirmed a protracted opinion that both must necessarily arrive at the same goal. In confirmation of this, allow me to furnish the following narrative:—The tailings from a celebrated silver mine, situated in the United States, were handed to me for assay. Under the usual treatment I obtained 13 ozs. 1 dwt. 8 grs. per English ton. A quantity of 5 $\frac{1}{2}$ lbs. was then submitted to the action of a model of Rickard's patent amalgamating concentrator; the results were precisely analogous. Every particle of the silver, as subsequent assays showed, was extracted. Afterwards the experiments were repeated upon some gold quartz of a very superior quality—in fact, ore containing upwards of 20 ounces per ton. In this instance the assays (for I instituted several, by way of verifying what appeared to be fabulous results) and the trial with

the amalgamating concentrator thoroughly agreed. Hence, I look upon it that means have at length been attained by which investors in mines of the precious metals may feel assured that they reap the full advantage of their investments, in the shape of the utilisation of the entire product of the property in which they may have been induced to speculate. W. WHITE.

Laboratory and Assay Office, 25, Finsbury-place, E.C., June 26.

MR. HERMON'S PRIZE ESSAY.

SIR.—Mr. Wilfred Creswick, Mining Engineer, of Sheffield, signed the fictitious name of "Robert Eloit." I should be glad if any correspondent would, if possible, say who and what profession Mr. Galloway, of London, is. Many believe Mr. Galloway is only an assumed name, and a person employed also under the Government. *Sutton Heath Collieries, near Prescott, June 24. Wm. HORTON.*

P.S.—Why not be honourable, Sir, and give proper names?—W. H.

THE COAL DUST FURNACE.

SIR.—The utilisation of small coal has for many years past received the attention of inventors, and almost innumerable projects have from time to time been brought forward for accomplishing the object in view; but the several inventions readily range themselves into three classes—those for burning the small coal without preparation by constructing the furnaces in such a manner that the fuel shall constantly be exposed in a series of thin layers to the action of the air necessary for supporting combustion; those for agglomerating the dust by combining it with a cementing material; and those for introducing coal dust and air together. In carrying out the first of these general principles has been to construct the furnace bars in the form of a series of steps, so that upon the small coal being fed into the furnace it falls from bar to bar, and ranges itself in long triangular heaps, which are consumed in the usual way. For the agglomeration of the small coal the cementing material used has been very various—tar, lime, glue, farina, and, in fact, almost every material possessing cementing properties having been in turn proposed. The carrying in of the small coal and air for supporting combustion has usually been done by applying the principle of Giffard's injector, and this mode of burning the coal has been proposed in most instances in connection with the manufacture of iron, notably as a convenient method of introducing a carburising material; but the cost of reducing the coal to the necessary degree of fineness, and the general inconvenience of the system, have prevented its extensive adoption.

Amongst the most recent inventions for utilising coal dust, that of Mr. T. R. Crampton, of Victoria-street, Westminster, is that which promises the greatest success; and as he has already consumed nearly 3000 tons of small coal without difficulty, the practicability of the invention cannot be questioned. That the results obtained have been slightly exaggerated is quite possible, but this is only natural, for inventors usually have special regard for their own inventions, and if, as is claimed for it, the coal dust furnace not only permits of the consumption of small coal, but also facilitates the manufacture of iron and the generation of steam, it matters little whether the economy is so very large as has been stated. The attention which the coal dust furnace received at the recent meeting of the Iron and Steel Institute was sufficient to demonstrate that it was not without merit, and the ordeal of discussion by a meeting of such essentially practical men as were there assembled is one which but few inventions could successfully pass through. Mr. Spencer, himself an inventor of iron-making machinery, and, therefore, not likely to be unfairly prejudiced in favour of Mr. Crampton, freely acknowledged that when he saw the machine on the previous day it appeared to be working well, and based his objections upon minor details; and Mr. Snelus, who admitted the principle, although he appeared to think that the invention would prove of greater utility if applied to another purpose than that for which Mr. Crampton is using it. As Mr. Crampton states that the cost of grinding the coal does not exceed a shilling per ton, it would be satisfactory to learn what system of grinding he uses, for it is evident that the coal must be reduced to an almost impalpable powder before it could be used.

The use of coal in powder is regarded by Mr. Snelus as desirable, but I do not at all agree with him. He says that every atom of heat produced by the combustion might be used, but he does not say that it would be more easy to secure perfect combustion by using the fuel in powder than by burning it in the ordinary way; and I am inclined to think that perfect combustion with powdered fuel is almost an impossibility, except in the hands of the inventor, for very slight irregularity in the supply of either air or fuel would give rise to difficulties. If the fuel were in excess of the requisite quantity of air, a proportion would be unconsumed, and the furnace would soon become choked; whilst if the air were in excess of the fuel, the effect would be to cool down the whole apparatus. Of course, under the immediate supervision of the inventor, no such difficulties would arise, just as we find that the chemist produces excellent results in his laboratory, yet the first time the attempt is made to work the same process on the commercial scale the failure is complete, and frequently the chemist is regarded as incompetent, because he could propose anything so absurd.

It is much to be doubted, however, whether the waste of the present system of burning coal is so great as complained of; for it is not unlikely that the same misapprehension may exist with regard to fuel as has existed with regard to smoke. Mr. I. Lowthian Bell remarked that although the smoke doctors declared that by the avoidance of black smoke an economy of 30 per cent. was effected, he had made careful experiments, and found that the saving did not exceed 5 or 7 per cent. He appreciated the value of the Crampton system nevertheless, for he remarked that he was rather inclined to the belief that these furnaces would be found to be more valuable where greater intensity was required than where they were simply seeking to economise fuel; but he thought the essence of the paper was wanting, as it did not state what saving of fuel was effected, and this, in my opinion, is what many are waiting for, before deciding whether or not they will adopt Mr. Crampton's invention. —June 23.

H. K. L.

REMARKS TO YOUNG STUDENTS.

SIR.—I noticed in last week's Journal an anonymous letter in reference to my remarks to young students and the Mining School. I do not believe it came from one connected with that school, as I believe them to be either manly enough to come out openly, or to keep a still tongue. Their late President, when he returned from Russia, came from Bolshoi, bringing with him a clergyman, then officiating there, to my house, a distance of 12 miles, to discuss with me the geological formation of the earth, and its mineral veins. I recollect it was on a Saturday afternoon; we had over two hours at it, and the clergyman was present. I gave him more than he ever knew before, but he was not satisfied—he stayed over Sunday, to come again on the Monday afternoon. I placed him in the same position he was in on the Saturday; he was bound to admit I was generally right before the clergyman, and you, Mr. Editor, are aware I have many times touched him sharp through your paper, particularly on what he and his co-professionals attempted to lay down as to the law of the earth's formation and its age at the great Bath meeting; and I have repeatedly touched him on the insufficiency of the Mining School if carried on in London. He knew from the former lessons I gave him that he would not better his condition; he made no reply. I could say a good deal more, but he is gone. I now watch the moves of the present President, who I believe from his lectures to be well-intentioned and a hard-working man; but I say of him as I say of the former. We differ on many points, and I again say, as I have always said, they will never produce well-trained miners and men who will persevere and search out Nature's laws. They never can master it if they have not had a portion of their training in the mines. I have never met him, but I believe him to be quite aware of this. A London school is not the right place to train young aspirants, to give them a slight knowledge of Nature's laws, sufficient to carry it out in some such way as I have before shown in the Journal, to accomplish which I hold myself ready to meet any respectable class of men to form a committee for raising a subscription to aid such a class of young men, and to put

down the first 10%, as I am confident Cornwall would then bring out a class of captains and men who would find and work paying mines; but, as it is now, mine captains are generally only to be compared to lottery men. If they have a good mine it is only found by a lucky chance. The majority of them never gave a well-grounded reason before they commenced the mine why they expected to find it a paying one. Poverty had all but overtaken them in Cornwall before they discovered it was time to be looking round to see what side lodges, cross lodges, caunters, elvans, and changes of strata were in granite that would bring in anything which was congenial to the formation of ore. The bulk of them to this day are not aware that all and every ore is produced and grown from invisible atoms, as the rocks and the trees are. I notice many men look strange and sneer when I tell them all creation was formed from invisible atoms under its own laws of affinity, aided by electricity to give it life. I ask them to find me two rocks which are composed of the same parts.

Then I take man and all the animal creation, the birds, and the fishes, and every creeping insect, with all the trees and vegetation. These are to be counted by millions, and they will find no two which differ in form and appearance to be composed of the same parts. Then let them point out two things in creation which are composed of the same parts. Even our old philosophers were puzzled when they saw strange animals in the lower fossiliferous rocks. Here was the simple beauty of creation. Everything formed new with every layer, agreeable to and with the affinities parts as they amalgamated together, and each produced new animals, rocks, trees, and vegetation. They became milder as the layers rose. They stocked the world with vegetation. Man was only formed with the upper layers, and about the last thing. The remains of man will never be found in any of the lower fossil rocks. He might be found if he fell where a new lime formation has grown more recently from the decomposition of some ancient lime formation, where atoms meet and re-form; but all things of this kind are of recent formation, and not in any way linked with first creation.

I might carry this a great deal further, but I see no necessity for it, as I have a book prepared, which I intend to publish, on all these subjects, and it is only a waste of time for me to reply to anonymous letters. You know well, Mr. Editor, that I published diagrams of shifts of lobes more than twenty years since, when neither the Chairman of the Geological Society nor one of his people, or indeed anyone else, ever attempted to disprove them. N. ENNOR.

Wadebridge, Cornwall.

REMARKS ON TIN DRESSING AND STAMPS-GRATES—No. 1.

SIR.—In my last letter I signified an intention of making a few remarks on tin dressing and stamps-grates. I was led to that conclusion by the remarks of Capt. Parkyn, who stated, in reply to my letter published in the Supplement to the Journal of June 7, that he was acquainted with many of the mines of West Cornwall, and was well aware of the difference which there was in the texture of the ore and the containing matrix of the various classes of tin and tinstone throughout the county, and of the necessity which existed for the observance of a corresponding difference in the reduction and concentration of such ores, and also that he had previously informed your readers in what that difference consisted. A few holes more or less to the square inch of stamps-grates, according to his views, contains the whole secret, and inattention to that single fact, he alleges, is the sole cause of the enormous losses of tin which are said to be occurring in dressing. This, Sir, is a matter of sufficient importance to justify a dispassionate review of the case, and in considering which reference should be made to facts as the substratum of personal opinions. It may be well for me in keeping with this view to look a little into Capt. Parkyn's position respecting stamps-grates previous to submitting any views of my own on the subject. That gentleman has stated that stamps-grates containing 25 holes to the square inch are best adapted for many of the tin mines of West Cornwall, and presumably amongst others those discharging their refuse into the Red River. Now, stamps-grates containing only 25 holes to the square inch, and to be so perforated as to present the smallest possible surface of resistance to the discharge of the pulverised ores, should be at least 1-10th of an inch in diameter, according to which such grates would contain a discharge capacity of only 20 per cent. of their entire area, and, therefore, 80 per cent. of the so-called grates would be a wall of metal permanently opposed to the discharge of anything from the stamps, and throwing back 80 per cent. of the ore thrown against their surface to be crushed over and over again. We are confronted here by a serious fact. How is it to be dealt with? Can it be explained away? Never. The pedestal of logic is a proposition set in truth, and cannot be removed without doing violence to the whole superstructure. But a maxim true as it presents itself to our views, and suggests a cure—"Remove the cause, and the evil will cease." Remove the present stupid stamps-grates and replace them by something more in accordance with the march of events and the enlightened time we live in, instead of trying to improve by their modification. It is not a partial but a radical change which is needed, and any proposed improvements which do not extend so far will be found of far too superficial a character to be of much value.

If holes 1-10th of an inch diameter were sufficiently small in grates for stamping tin, a modification of the Cornish crusher might be used for the reduction of such ores with very great advantage, and with corresponding economy. Where granular or isolated crystals of tin are found, especially if they are numerous, or, as is sometimes the case, preponderate in the matrix, it would be impossible to discharge such heavy grains of tin from under the stamps in time to prevent an important portion of them from being crushed to a finer size than is either compatible with economy in the working, or the conservation of the tin during the process of dressing, whatever kind of grates are used; but with the present kind, whether they contain 125 or 125 holes to the inch, a great deal of such tin finding its way under the stamps would inevitably be reduced to a much finer size than is requisite or profitable.

It will not, I presume, be difficult to conceive why it is that the present style of grate has so long been continued in use, as it seems to be a necessary concomitant of the present method of feeding the stamps, and appears to have been constructed as much with a view to impede as to facilitate the progress of the ores from the stamps. Where due vigilance has not been exercised by the watcher, so as to prevent the stuff from surging in the pass, and causing a run, which at times inundates the stamps, and for the time being totally deprives it of any effective power of action, we have frequently seen stamps-grates, dense as they are of themselves, patched with fragments of the same material, parts of broken grates, and propped withal, to prevent the stuff from being forced through them in much the same condition as when it entered the stamps from the pass.

A system of stamps-feeding which opposes the introduction of a more facile medium of discharge for the pulverised ores is radically and fundamentally wrong, and any proposed change which does not aim at the immediate amelioration of such a defect is not worthy the attention of those interested. A more liberal discharge of ores from the stamps has long been considered a desideratum in this department of mining, as evidenced by the attention which has been directed from time to time to an enlargement to the utmost limits of the area through which such discharge is effected. But such efforts I hope to be able to show, though laudable in their aim and intention, are comparatively ineffectual, from a lack of comprehensiveness, both in theory and practice, regarding the source whence the evil originates; and nothing, I think, can be more futile or ill-advised than to devote time and labour to an attempt to invalidate a cause, and render it inoperative, by the mere modification of its effects. A few holes more or less to the inch in the style of grate now used, or a few more square inches in the area of the aperture of discharge from the stamps, though of some little importance in individual cases, is far too trivial to engage one's attention, whilst knowing that the primary source of the defect sought to be remedied would remain wholly unaffected by such changes.

If the present clumsy and uningenious style of stamps-grates is shown to be an impediment to the proper discharge of the pulverised ores from the stamps, and they are at the same time the necessary concomitants of the present method of feeding the stamps, then the question of modifying that method becomes at once an object of

primary importance, and should exercise the attention of all interested. With this object in view my next letter will commence.

TIN MINING AND TIN DRESSING.

SIR.—I will thank you to allow me to correct an error which occurred in my letter published in the Supplement to the Journal last week. I inadvertently attributed to Capt. Parkyn a paragraph, which he evidently did not write, published in the Journal of May 17. I cannot account for the error, but this I know, that nothing was further from my intention the writing of a falsehood. I exceedingly regret its occurrence, and take the earliest opportunity to correct it. The paragraph which I refer to with reference to Wheel Mary, and read as follows:—"The tin mine, 18 in. wide, more than half sold tin." This paragraph appears in the Supplement, and not in Capt. Parkyn's report, as might be inferred from my letter. I hope an explanation will be considered satisfactory, and allay any prejudice which may have arisen from the mistake that has occurred.

PARKYN'S "SAVE-ALL" TIN DRESSING FLOORS.

SIR.—"Mine Agent's" letter of last week is like all his other productions—impracticable as to the subject in hand, but full of personal personalities, insults, and such like. I thought, Sir, that mine agents were respectable men (and I believe the majority of them are) and not bullies. In his letter of last week, like all the others, not a word did he say to prove my dressing-floors are not the "Save-All," but jumped at once to the stamps-grates, thinking, I dare say, that he had done with me on tin dressing. Should he think so, makes a mistake, as I have not done with him yet. Fancy a man calling himself a mine agent and opposing me and my alphabetically plan, and never, from the first, pointing out a single one of my references letters to be wrong, either practically or theoretically. I always thought that any discussion between parties on mining, either above or below ground, would be discussed for mutual improvement and for the purpose of doing good, or that some good might come out of it, and that your correspondents would not be bullied by low, mean personalities and untruths, &c., &c. Now, before stated that I am not a writer, but a practical miner, but, however, I am not ashamed of my letters, and when I tell "Mine Agent" I was underground to dig and mine the precious metals of a mine boy of 12 is very limited. In the winter, however, when it was forenoon cold, I went to night-school, and when it was afternoon cold I went to school in the mornings, and this I did for years, and I may not, after all, be so ignorant as "Mine Agent" may think, and I don't think this is any disgrace to me, whatever "Mine Agent" may call it. Perhaps "Mine Agent" might have been brought in one of the large account-houses I mentioned the other day, if so he, no doubt, fared sumptuously every day without ever seeing a lode, level, or stope for years. His father might have been a manager of mines, and it may be that while I was educated in the rough work of mining that my friend was being brought up on eating beef, and thinking what a clever fellow he was growing. Sitting at a dinner table is not mining, and it is high time that the mines in Cornwall should be free from such men. Some years ago I well remember a gentleman managing a mine carrying a great swell, the account-house well stocked with all kinds of wines, and splendid dinners, and money shamefully wasted. I began to think that this manager was mad, and I was a long time before I could find out his whereabouts; at last I found he had been the manager of a workhouse. Well, Sir, 17,000*l.* was soon spent, and nothing for the purpose done. Some men calling themselves mine agents know as much about a mine, or the price per fathom for sinking, dressing, stopping, &c., or tin dressing, as a few knows Sundays from weeks days. This, at the present time, is a great curse to mining, and ought to be exposed.

"Mine Agent" says that I have only one idea. I would rather have one good idea than a thousand bad ones. I will just tell "Mine Agent" what I did with my one idea. Last year a certain mine, which I was as sure as a man could be that it would open well, and by investing only 50*l.* realised within 12 months 1000*l.* Again, certain tin mine which I know well. I recommended the share of 20*l.* and 30*l.*; they are now 5*l.* each, and I am mistaken if the share will not be double within 12 months. Now, this one idea is not good, and I don't think that "Mine Agent's" adventures would have any objections to such an idea; and I am very pleased to inform "Mine Agent" that I never remember in my 30 years' experience a better opportunity to make money than now in two or three mines that I can recommend; they will be sure to rise considerably, and the public will soon see through whom they should invest with one good idea. I say that "Mine Agent" is inconsistent, and I have not forgotten that I stated in the Journal that I could make profits from tinstuff only yielding 5 lbs. tin to the ton. At that time the rich lodes in Wheel Mary were not discovered; moreover, I did not report in the Journal like "Mine Agent" wrote, and he did it for the very purpose to injure me and to raise himself. I think the public will consider it strange that two individuals pursuing the same object should take diametrically opposite courses to accomplish it; but one thing it is difficult to understand, which course "Mine Agent" is taking, for he has never yet pointed out a single failure in my "Save-All" plan.

As regards stamps-grates, my letter is gone forth, and I am quite prepared to stand by it, but I am going to settle with "Mine Agent" the other thing first. I think it is very unfortunate that "Mine Agent" writes such non-practical letters, as when his name comes out it will do him harm; that he knows, of course, otherwise he would not be ashamed to declare himself. I have no opinion about him, and that is not much, in which your readers will, no doubt, agree with me. My reports have been borne out by several experienced mine agents, in fact, more than I reported; but the best report will be the good sales of tin which will follow my reports, and then "to your tents" "Mine Agent" and the unprofitable like of you.—*St. Austell, June 25.*

TROS. PARKYN.

MR. ENNOR, AND TIN DRESSING.

SIR.—Mr. Ennor is right when he says that it is not his business to look after other people's tin; yet a man in civilised society is generally held responsible for the correctness of his assertions. Mr. Ennor having set himself up as the only public instructor in mining matters worth having, and as he seems so fond of enquiring into other people's business, I did give him credit for feeling an interest, to some extent, in enquiring whether his own statements were true or false. It is matter of deep regret with me if Mr. Ennor intends to declare that it is beneath his notice to enquire into the truth of his own statements. Had that declaration been made before, I should not have taken the trouble to reply to his former communication. Yet what do we see? We see Mr. Ennor publishing an estimate of the value of the sea beach below the Red River, and afterwards acknowledging that he had never been there. We see him estimating the value of leavings, both recoverable and irrecoverable, lost at Drake Walls, citing the high authority of the Duchy officer, and yet that officer did not, in his remarks at the recent meeting, confirm Mr. Ennor's statements. We see this Mr. Ennor informing the world of 100,000*l.* worth of tin having been lost in one mine, and in maintaining the position thus self-assumed, saying he took it for granted as he thought his informant a respectable man. Mr. Ennor complains of my having questioned his veracity with regard to this matter. Now, if he reads my letter aright, he will find that he is therein asked to name the mine, and that more for the sake of his own credit than for any other reason. Not being myself in the habit of expressing doubts of men's veracity, but being in the habit of enquiring into the truth or otherwise of all questions, I felt that the fullest information on so important a matter would be desirable. Questioning men's truthfulness does not appear to me to be very wise, but an enquiry into whether what they say is truth or error should not, in my opinion, be objected to. There are many things, both above and below the earth, we know nothing of; hence better we regard every statement made as question for enquiry. But if Mr. Ennor will not name this mine, how can we enquire whether he is deceived in this as in other matters, or otherwise?

Next, we find Mr. Ennor writing long notices about frames at a foundry. Did it not strike him that the proper information for him to have sought was how much tin they got out, and how much it cost to get it? Has this enquiry been effectually gone into he would

have found that his graphic description was altogether needless. But this wonderful discoverer is not yet satisfied; he next insists that he has not the temerity to assert, by saying there may be hundreds of frames down the valley working this waste, instead of which he had gone down there he would have found many acres of waste land where he may put up frames, and work over the dirt himself. If the tin is going down from here like dirt Mr. Ennor may now display all his accumulated and reserved ability, and make a fine thing of it. Had Mr. Ennor enquired into the history of the valley he would have found that frames had been put in again and again, and taken out again and again, and that there are many down there now lying idle, after having been tried by their owners and found unprofitable. This does not look much like tin going down the valley in such quantities as Mr. Ennor insinuates. If it does, here is a fine field for his enterprise.

If age brings wisdom always, the man "much older than myself" should have been right when he told Mr. Ennor, and Mr. Ennor should have been right when he delivered to the world the valuable information that the refuse from Pedra-an-drea goes down an adit shaft at Sparrow. Nevertheless, this is not true. Mr. Ennor makes much of what he calls the amusing part, a man having told him that he would shortly put up a frame in his back kitchen. That some people amuse by the very absurdity of their remarks Mr. Ennor is a living proof. Some minds will be amused by his writings, while others may be instructed thereby. Even the knowledge to how deep a degradation ignorance, egotism, and pretension, without any honourable sentiment, may reduce a man is at all times sorrowfully instructive. Is it not undesirable that Mr. Ennor should make so many strong statements in the public papers, caring nothing about their correctness? It strikes me that from a man who so much meddles with other people's business this further enquiry is due. Does Mr. Ennor think it will bring him any honour this publication of statements without properly enquiring into their correctness? If so, I do not envy him the position he is likely to attain thereby.

MINING IN MONTGOMERYSHIRE.

Sm.—Llanbrynmair, Llwybran Mwyn Syr, says my guide, in answer to an interrogatory as to the proper name of the place, which, after awhile, we found to signify, in Anglican, "St. Mary's Church on the hill, with grey paths." Whether the paths leading up to the old church which we presently passed were once upon a time really lined with lead ore we could not ascertain, but certain it is that after a heavy shower of rain the roads, especially the ruts, were pretty well lined with "blue" on the morning of our walk.

There are several small "tacks" around the village, but the first of any importance is the FROD VELLAN, situated just behind the village. A few minutes' walk brought us up to Cwm Coch, where the principal works are, and a single glance at the goodly piles of ore outside shows that the enterprise of the proprietors, who have crossed a quarter of a mile in length to intersect the lode, has been suitably rewarded. The captain kindly invited us to go into the mine, which we gladly accepted, and getting into one of the trams, were soon in the end, where we were provided with candles to see for ourselves; and certainly, if there were any doubts before, a sight was there to dissipate all fears, for near the forebreast was a lode that will produce 24 tons of lead per fathom; this, it should be remembered, is over 70 fms. below the surface.

About a mile north-west from Frod Vellan is the EDNANT MINE. They have just intersected a lode here in their adit cross-cut; the lode is over 12 feet wide, composed of killas, quartz, carbonate of lime, and lead ore, all seeming to indicate that it will soon rival its neighbour. Going up the hill we had a view of the CWMRYCHIAN MINE, but time would not permit of our going to see it. Two miles west is the CWM NANT DE MINE, to reach which we had to pass the RHYDYR MINE (at present suspended); there is evidence of a great deal of work being done here, and at one place on surface we saw a large pile of lead ore; this, I remember reading while since, was begun by one of the Old Mother Nature, in one of her "freaks." This, I suppose, so inspired the late manager that he discarded the rules of mining, took to driving cross-cuts, and trusting to Nature for a few more liberal "freaks." However, under a new management, which evidently contains more system, the shareholders may yet look forward to brighter days.

About 1½ mile north-east from Nant is the once celebrated LLANERCHYR MINE, which, at the time of our visit, had scarcely recovered from the shock it received by the late catastrophe, when six men were buried by the falling in of the adit level; the fall is so extensive that after the men were rescued it was decided to abandon the old mine for the present, and sink a new shaft, so as to get under the old workings. It will, therefore, be some months before the mine gets again into working order. Half a mile south is the famous CAE CUNY MINE, worked by the same proprietors as LLANERCHYR. —Sir John Canby, Bart. The piles of ore here, both clean and in course of dressing, were conclusive evidence that the old mine still continues to "hold her own." With your permission, Mr. Editor, I will next week continue my rambles west. PEDESTRIAN.

EAST POOL AND WHEAL AGAR MINES.

Sm.—Allow me through your valuable Journal to express my unqualified approval of your correspondent's recommendation to amalgamate the above mines upon equitable terms. Let the shareholders of each mine appoint a referee, if they cannot agree, who shall say upon what terms they shall become united. The time is not yet come when the shareholders could expect to have share for share in the joint mines, but soon the mine may warrant these terms. The engine-power of Wheal Agar is, doubtless, sufficient for both mines, and would so far diminish the cost that East Pool would be positive gainers to work two engines—their own 60 and the Agar 70—than work as they have done during the past six months, from the fact of their engine and pitwork being inadequate to the work required. The advantages of the position of the mine for dressing floors, its great extent, its numerous lodes north, and the fact that all East Pool lodes to the south ones of Burncoose dip into Wheal Agar.

While writing this I hear that East Pool engine has broken down, and that weeks may elapse before they again get to work. Could not this have been prevented? When one pursues a policy of self the end carries its own frustration, as in this instance. Let the shareholders of East Pool consult their true interest, and the result would rapidly develop a confidence in their shares as surprising as satisfactory. Let us hope that at the coming meetings of the two companies this matter may be ventilated. AN ADVENTURER.

FORTESCUE TIN MINE.

Sm.—Taking the opportunity of a visit to St. Stephen's, I made another call at Fortescue Mine. I found that the engine (a 34-in. double-acting rotary) had been at work ever since the 11th inst.; it is as good as new, and works most satisfactorily. It was supplied by the managing director, Mr. J. Harris-James, to the company for the small sum of 400l., which I consider is about 800l. less than its value. Mr. James deserves much commendation for the sound judgment displayed in laying out and executing the works. Everything is evidently well done. The stone buildings—engine and boiler houses, smithy, and shaftmen's and pitmen's houses—are substantially built, also the powder-house. The account-house and timber and saw houses are of wood. I did not go underground today to see the lodes (eight in number), which are said to be very valuable, and which are shown to be so by the rich stuff now lying at the surface waiting the operation of the reduction appliances, which are in process of preparation. The agent—Capt. Phillips—says that the tinstuff will average a produce of 5 cwt. to the 100 cwt. The discoveries on the lodes when known by the shareholders cannot but be highly gratifying to them. They are said to be bona fide shareholders (not men of "straw"), who took their interest as an investment, and I believe it is a safe one.

The battery of 24 heads is to be attached to the pumping-engine, and will be ready (per contract) in a fortnight. On the occasion of starting, many of the shareholders are expected on the mine, who, I do not, will be gratified with the condition of affairs. I suppose that after the 24 heads are at work the returns will be from

10 to 12 tons of tin per month, but the yield of ore will, I doubt not, require another set of 24 heads in a short time. From my observations of the prospects, I am able to confirm the good opinion expressed by some of your correspondents as regards the productive character of the lodes. Capt. Phillips says that the bad winter (unusually wet) retarded the operations, otherwise sales of tin would have been made ere this. R. SYMONS.

Truro, June 23.

PROGRESSIVE MINES OF CARDIGANSHIRE.

Sir,—I do not often answer letters inserted in the Journal unless the parties writing them choose to attach their names thereto, or that they have a direct tendency to interfere with the mining industry of this county; and I should not reply to "Plain Matters of Fact" had he stated what was true; but when people are compelled to resort to what is false, either to substantiate their own statements or to confute the statements of others, it deserves to be taken notice of. "Plain Matters of Fact" states that "the good workmen are plentiful, and at moderate wages—say 16s. to 20s." I said nothing of the kind. I said I had miners working at 16s. 6d. per week, that some men were getting 24s. per week, and that the average would not be above 20s. If he is a gentleman, and doubts the fact of the men alluded to working for 16s. 6d. per week, and will favour me with his name, I will immediately give him the address of the secretary in London of the mines alluded to. He says, also, I have not seen the discoveries at Esgrair hill. It is true I have not been underground to see them, but I have seen the ore at surface which has been broken from the discovery named, and the underground department was known to me many years ago. As to the mine being called West Esgrair hill, why not call it so? It stands to the west of it, but the name makes the mine no better nor worse. If it is the object, secondly, to throw a doubt over the minds of the public that a splendid discovery has been made at Idwyn Teify, he will miss the mark. The discovery has been made, and is to be seen at surface by anyone having the use of two eyes. Thirdly, I do not believe the statement that any mine agents in the county, who were prepared to pay 25s. per week, were obliged to suspend operations on account of the scarcity of labour. And, lastly, as to his having any personal knowledge of me, I can only say that that is a matter of the most perfect indifference whether he has or not, and has nothing to do with what he has written about. Any further remarks on this head will pass unheeded, unless his name is attached to what he writes, and when men write the truth they need not be ashamed to do so.—Gwynn, Aberystwyth, June 23.

ABRAM FRANCIS.

LEAD MINING IN WALES—MR. ENNOR.

Sm.—Seeing, in the Supplement to last week's Journal, a letter from Mr. Ennor on this subject, which commences thus—"Surely you will allow me to reply to the letter inserted last week from my old friend, Mr. Francis"—you and your readers will, I think, be not a little surprised to hear that I never met with that gentleman or ever had the pleasure of seeing him in my life. During more than thirty-four years, in which time I have been engaged in some way with nearly every mine in the county, it would seem strange, if he has had to inspect mines in this district, that we never had a meeting, and that I have never heard of his having done so. To attempt to answer a letter full of untrue statements, and containing nothing but such a lot of ridiculous nonsense, I have neither the time nor the inclination to attend to.—Gwynn, Aberystwyth, June 23.

ABRAM FRANCIS.

DRAKE WALLS MINE, AND ITS NEW MANAGEMENT.

Sir,—I think it will be nothing but fair to allow me a short space in your valuable Journal, in the way of self-defence, after seeing so much has been pronounced and accomplished in restoring this badly-conducted old mine. I was much amused at reading, in last week's Journal, the loud blast of self-commendation sounding on every side, particularly on the occasion of restoring the 50-in. cylinder pumping-engine at this mine, and the number of influential subscribers to the worthy hosts of "managers," and had hoped that all things would have continued under the same peaceful feelings until the end, or up to the time when everyone connected with the gigantic money-making enterprise would be able to tell their own tale. But to my great surprise I find, also, in last week's Journal, some, I think, truthful remarks from a much respected mining engineer, Capt. C. F. Colborn, of Tavistock, who seems to be inclined to disturb the nest. Why should this be? Let "them" set the trap in their usual prophetic style, without such disparagement of personal reputation on former liabilities, &c.

I am not inclined to think the time is now at hand when spirited mining is to be disregarded, or scientific management covered under a bushel; but, on the contrary, I am glad to hear that after the numberless evils which have sprung from the course of 200 years of defective development in the extraction of 275,000,000 worth of tin, that there should, in these latter days, as Providence would have it to be, two prophets found, and more than prophets—Messrs. Skewis and Bawden—who are able to supersede all others, and bring this very exhausted old mine into a profitable investment, for which they very modestly ask the public the moderate sum of 22,000l. It is pretty well known that I have been the managing agent of this renowned prize of 1873 for upwards of the past 20 years, and am well acquainted with every department at surface, and every part of the underground working, with its intrinsic values; but I have not the slightest desire to disparage the merits of the present promoters, who are trying to inspire the public to believe a secret, which time, money, and disappointment is certain to unfold.

Watchet, Tiverton, June 25.

THOMAS GREGORY.

DRAKE WALLS MINE.

Sir,—Anonous of the remarks of Mr. Colborn in last week's Journal with regard to this mine, it has occurred to most people acquainted with its history as something very remarkable that the very burrows, as represented in the prospectus recently issued to the public, should contain more tin per ton of stuff than much of the crop raisings of Dolcoath and Tincroft, two of the greatest mines in the West. June 26.

OBSERVER.

MINING IN DERBYSHIRE—ECTON.

Sir,—Living, as I am, in this isolated district, but being, nevertheless, a thorough practical miner, I could not but be otherwise than startled (and I have since passed before making any enquiry), on reading, in the Journal of June 7, that an adventurer has come out of embryo, and with it, I think, a most unwarrantable statement that a capital of 25,000l. has been already subscribed to further the development of Capt. Blackett's mineral interests in Ecton. And then, forsooth, we are bolstered up with the notion that "a gentleman having carried out such spirited operations in this neighbourhood" is the person selected to develop Capt. Blackett's interest. But have these very spirited operations (to the tune of 60,000l.) had the effect of yielding one farthing to the shareholders? Certainly not.

If men will, at the last moment of being kicked from their balance, become the speculators of a last throw under which the thimble may be placed—or lure the mining public with the bait of last straw, to save them from positive wreck, they might as well, at the last moment, and in such a procedure, if even palpably wrong, might invoke in the eyes of an indulgent mineral public an excuse for deception. I am not aware that either Mr. Wass or Mr. Mather are the talented miners alluded to in the paragraph; but if the latter gentleman (and I beg he will accept my apology), it may be remarked that, without the aid of a company, he has at a great expense, single-handed, borne the brunt of a heavy trial at Ecton, and I am glad that his capital and long forbearance is likely to be productive of satisfactory results. But to say that a company is prepared to expend the sum of 25,000l., without some legitimate prospect of success, is to design to commit some sense as the difficulty of dealing with the peculiar circumstances under which Capt. Blackett's mines are locked, as also the absurdity to ask of any shareholder to risk the forlorn hope of a return upon the silver tone of a questionable adventurer. I should, however, be glad if Mr. Mather or his friends would go to the extent of their contemplated scheme, and that they would with their facilities (and he or they are the only proper parties) of extending their interest on the duke's mines, and consolidate those of Capt. Blackett.

Hartington, June 21.

A MINER.

SOUTH TOLCARNE—SOUTH CONDURROW.

Sir,—Not many months since I pointed out that a splendid property was to be found close to South Condurrow Mine, and one which would be a powerful neighbour. By the report of June 19, in last week's Journal, we find this information now fully corroborated. Such a magnificent report seldom falls to the lot of expectant shareholders to read. It may well be called "a report of the greatest importance." The great South Condurrow tin lode, so fully anticipated, is struck, and it is cut of precisely the same character as in South Condurrow, and already traversed with rich seams of tin, just as in the great lodes of Dolcoath, Tincroft, &c. It varies in width from 20 to 30 feet. This discovery opens up the prospect of a great and profitable mine, of which there is now little doubt. If we call the value of these shares but 15s., we find that 4500l. is the price of the mine—a mere bagatelle for one of the best properties in the parishes of Illogan, Camborne, or Redruth, &c. The value of the great tin lode now cut will be determined in a few days. It is worth a high figure in South Condurrow, Capt. Vivian placing the utmost confidence in the undertaking, being the largest shareholder. The mine contains eight lodes of a well-defined character, the district being the finest in Cornwall. Great expectations have been aroused concerning the future of this property, which at the present price has no rival in the market. South Condurrow, at 6d. per share only, or 37,000l. for the enterprise, is very cheap; it has, however, been standing at 11d. per share (3125 in all), or 67,500l. for the property yet South Tolcarne can now be bought at one-ninth of the former amount, or at one-fiftieth of the latter sum. I do not say that this remarkable difference is likely to remain; but it is, doubtless, an undeniable fact at the present time, and one of the enigmas of mining, and a mystery. London, June 25.

OBSERVER.

MINE BROKERS—No. II.

Sir,—The late Mr. James Line, whose decease many regret, was a genial, and, I believe, an honest, man in all his transactions with his species. He would not wilfully injure any man, woman, child, or beast—or if he harmed anyone it was himself. He died about three years ago, after a short illness. Mr. Birdsey, who died about, probably, four years ago, was another specimen of honest industry in the mine broking department. Whatever may be said about the Gracechurch-street or Gresham House brokers, the foregoing are specimens of what brokers should be in their dealings.

The following anecdote shows a rare specimen, I think, of honour in a mine broker. People in general know that the "Statute of Limitations," as it is called, bars all claims exceeding six years' existence, unless admitted by the debtor. In the year 1866 a broker became indebted to me in a sum of nearly 300l. Shortly after that he fell into difficulties, and took the "benefit of the Act." After that he recovered his losses, and now stands in good circumstances. Finding such to be the case, I called upon him in London, reminded him of the debt, and expressed a hope that, as he had been successful, he would not ignore the debt, although barred by statute. He said—"I should be sorry for you to lose anything by me; draw on me for the amount." I did so, and have no doubt that at maturity the draft will be honoured.

I give you now a singular instance of honour in a man, not a broker. In 1850 a young gentleman called on me, and asked if I would sell him a small property?

I said "Yes," and we agreed in the sum to be paid for it. He then said "I cannot pay you now; will you take my note for it?" I took his note, and lost sight of him for twenty years, when I met him in a road. I said "Have you forgotten the note of hand?" "No," said he; "but I am very poor now." Sixteen years more elapsed, when, in 1866, meeting near Truro, a solicitor who knew the gentleman referred to I said to him "How does Mr. T. get on?" "Very well," said he; "does he owe you anything?" I said "Yes; but the debt has been standing thirty-six years." "Call upon him," said he; "he will pay; his father died, and left him some good property." I took his advice, and received the amount, but no interest, being glad to get the principal.—June 19.

(For remainder of Original Correspondence see to-day's Journal.)

Meetings of Public Companies.

NERBUDDA COAL AND IRON COMPANY.

The thirteenth annual meeting of shareholders will be held at the London Tavern, on Thursday.

The report of the directors to be submitted states that the quantity of coal sold during 1872 amounted to nearly 800,000 tons. The coal at heap on Jan. 1, 1873, was estimated at 300 tons round and 2000 tons small. The colliery consumption during the year may be calculated at about 3 tons per diem. The reasons for the manager why no larger output has been obtained are so comprehensive as to exceed the space of any report that any remarks from the directors would be unnecessary. The directors believe that the collieries are now being worked in an efficient manner, and certainly at a considerable reduction of cost which may be attributed, to a great extent, to the alterations made by Mr. Maynard from "day work" to "piece work." Several official visits have during the past year been made to the collieries by the Chief Commissioner of the Central Provinces, Mr. Medlicott, of the Geological Survey of India, and others, and much satisfaction at the greatly improved practical development of the mines has been expressed. From advice recently to hand the directors are pleased to report that the water in the old incline had been during the month of April reduced 53 feet, thereby giving five workable places north-west thereof. The fire also in the No. 2 or Keating's level is almost at an end. In this level Mr. Maynard anticipates obtaining some first-class coal. As the foregoing have always been considered to be places from which much coal might be obtained, it is hoped that now they are made available the output will be materially augmented. In the No. 1 north level, over 16 ft. Rise Dyke, coal was struck on April 24, thus giving a new area.

The directors regret having to announce to the shareholders that on the 20th ult. the No. 1 north level had been flooded, and the No. 2 level had been killed, and they were advised by telegram that the Alice Maud pit had been flooded, killing one European and eleven natives. A full report of the official investigation to enquire into the cause of the sad disaster has been received, and the directors have much pleasure in acquainting the shareholders that no blame whatever is attached to the manager or his subordinates. Active operations will now be made to sink a new pit a little distant from the present shaft, but as some time must elapse before it can be completed the manager has been urged to exert himself to the utmost to increase his output from every available working. A 60-horse power engine for sinking the new pit, ordered sometime since, is in course of construction, and may be expected to be ready for shipment within the next two months. The total cost of the engine, f.o.b., will be 2360l., of which sum 950l. has already been paid. In accordance with the request of Mr. Maynard, the directors have purchased and shipped a 20-horse power engine, by Robey and Co., of Lincoln, and one of Tangy's special pumps, for draining the No. 2 shaft, at a cost of 1036l. The engine can be used either with the special pump or for pit sinking.

As a market for the sale of the small coal appears to be opening up, the patent process for utilizing coal slack has, under the advice of the manager, for the present been abandoned, and the best quality of coal will be carried to the market. The intentions notified in the last annual report of sending out larger machinery for the manufacture of the patent fuel.

The accounts have been carefully prepared, from Jan. 1 to Dec. 31, 1872, and have been audited by Messrs. J. Waddell and Co. (public accountants). Messrs. Cutler and Martineau having resigned their seats at the board in December last, Mr. James R. Corbett and Mr. T. S. Haviside have been elected to fill the vacancies. The directors who now retire by rotation are Mr. Samuel J. Wilde and Mr. John Hawkins, both of whom being eligible offer themselves for re-election. The auditors also retire, and being eligible offer themselves for re-election.

ST. JOHN DEL REY MINING COMPANY.

The annual general meeting will be held on Monday, when the directors' report, of which the following is an abstract, will be submitted:

At the close of last year the work of sinking the vertical shafts for the purpose of reopening the Bahu and Cachoeira Mines in depth was under suspension, in consequence of an influx of water from the old mines. As stated in the half yearly report adopted at the meeting, held on Dec. 20, the shafts were pumped dry, and the sumps reached on Aug. 3, and sinking was resumed on the 27th of that month. From that date to Oct. 31 the sinking was as follows:—Shaft A, 8 fms. 3 ft. 2 in., making its total depth 125 fms. 3 ft. 2 in.; Shaft B, 8 fms. 4 ft. 1 in., making its total depth 136 fms. 2 ft. 4 in. During the succeeding six months ending April 30, 1873, Shaft A was sunk 21 fms. 3 ft. 10 in., making its total depth 147 fms. 3 ft. 10 in.; Shaft B, was sunk 22 fms. 4 ft. 6 in., making its total depth 158 fms. 8 ft. 10 in. The entire depth to be sunk to carry the shafts 10 fms. below the old workings is 175 fms.; there remain, therefore, 20 fms. 5 ft. to be sunk in shaft A, and 21 fms. 5 ft. to be sunk in shaft B, to reach the depth at which it is proposed to open on the Cachoeira and Bahu lodes, hitherto worked so profitably.

A fifth ventilating level, connecting the shafts at about 140 fms. from the surface, was commenced in March, and will probably be finished in May. The temporary arrangements for drawing to the surface the stone quarried in sinking the shafts by the old Collyer's system, having been damaged by the falling in of the ground over it, the Collyer's shafts had been erected, it became necessary to push forward the erection of the new hauling wheel, which was accomplished by great exertions on the part of the mechanics working day and night by Aug. 27; the wheel has been working most satisfactorily ever since. It is the largest wheel ever erected by the company, measuring 48½ ft. in diameter, with two sets of buckets for reversing the motion of the wheel, each 4½ ft. wide.

The mineral tramway for conveying the mineral from the shaft's mouth to the stamping mills has been completed as far as the nearest spilling floor, the rails laid, and the inclined plane mining gear, in sinking the shafts, is being carried over it to the stamping mills. The work of tramping the wagons of mineral from the shaft's mouth to the spilling floor, which was formerly performed by hand labour, will in future be accomplished by machinery at a considerable saving of expense. The Gamba pumping wheel, having become useless on its former site after the closing of that mine, has been removed and reconstructed near the new shafts, to be available for working a pump in B shaft if necessary. It will be remembered that when sinking was suspended, in November, 1871, by the influx of water into both vertical shafts, the water rose to the level of the water in the old excavation, thereby indicating that there was free communication through the fissures in the rock between the shafts and the old excavation.

As the water was lowered to the sumps, it was concluded that it had also been lowered to that horizon in the old excavation, but as access could not be had to the old mines it could not be positively ascertained that such was the case. As the sinking proceeded, however, the fissures above named became more distinct, and assumed, at the depth of 128 fms. from the surface, the form of a visible crack in A shaft, through which the water passed freely. The north side of B shaft, at this horizon, showed disturbance, but no actual crack. On further progress it was found that the water continued to flow in through the lower extremity of the crack at the sump, foul air flowed in higher up, thereby showing conclusively that the water in the old excavation was following down the sump. The crack above referred to has continued down with the shaft A some 27 fathoms. At the depth of 155½ fms., however, solid rock, free from cracks, was reached, and this satisfactory state of the sump has continued up to the last advices, when the depth of 179 fms. had been reached. The foul air flowing into the shafts, as above referred to, at first occasioned some inconvenience and delay, but on a waterblast being constructed and applied all difficulty therefrom was overcome. The total expenditure incurred on the new shafts' account for the year ending April 30—taking the cost for April at the amount estimated—has been 17,817.8s. 10d. The cost of sinking and the work essential thereto, with the requisite materials, as above described, has, therefore, been 118,885.5d. per fathom. The estimate for same, as given in the directors' report for June, 1869, was Rs. 1080 per fathom, or an average exchange ruling since the work was commenced—22 13 16d. per mile (112½ ft. 3s. 3d.). The estimate has, therefore, been exceeded up to the present time by 67.5s. 2d. per fathom, which, if continued until the shafts are completed, will amount in the aggregate to a little over 2000l., an appreciable amount when it is considered how large the work has been, and that it was suspended by influx of water for nine months, during which more than the above excess was expended in keeping the pumps at work, though no progress could be made in sinking. The success in the estimate for surface works up to April 30 amounts to about 16,000l., caused, in the first instance, by the extension of the original design as regards the water-power, to ensure greater efficiency; but later, and to a much greater extent, by the increase in the pumping-power and re-arrangement of the hauling power and other extensive work, including 400 ft. of road through deep cuttings, consequent on the falling in of the mine surface. After the falling in of the mine surface in February, 1872, and the consequent cessation of mining operations in the Cachoeira and Bahu Mines, some of the stamping mills were kept at work on mineral quarried at surface, being portions, as it were, of the output of the Bahu and Cachoeira lodes, and upon them a limited force was kept at work as long as mineral could be there found to pay the expense of quarrying and treatment. The arrastres have in like manner been kept in motion, treating refuse and other sand collected from about the stamping-mills, from the sand courses, and from places on the establishment on which it had accumulated in previous years.

The average yield of the surface rock stamped at Morro Velho, during four months as above, was 2075 cwt., or 4 dwts. 19 grs. per ton. The average yield of sand from the mineral quarried on the Fernam Paes Estate, and stamped at the Gaia stamping mill, during 14 months, was 1744 cwt., or 4 dwts. 6 grs. per ton. The amount of expenditure over receipt on the Morro Velho Estate during the year, the expenditure being for 13 months ending March 31, and the receipts for 14 months recovered during 13 months ending April 8, as shown by the account No. 4 appended hereto, amounts to 7354l. 13s. 1d. There has been, also, a loss on the operations on the Fernam Paes Estate of 484l. 4s. 1d. These results, considering that the whole of the fixed expenses of management in every department is charged to the Morro Velho account, and that during the last nine months of the year the quantity of gold recovered to meet it was of trifling amount, may be deemed satisfactory. The expenditure for the 13 months has been reduced from 58,688l. for the 12 months of last year to 13,004l. for the 13 months of the current year.

The company is indebted to the superintendent, Mr. Gordon, for this favourable state of the account. But for the admirable and satisfactory arrangements made by him for the employment of the force, when the company from the falling in of the mines was unable to find them profitable occupation, a further serious loss must have occurred during the year. The directors deem it right that prominently to acknowledge the important service rendered by Mr. Gordon in this respect by Mr. Gordon, involving, as it has, a very considerable amount of labour, much anxious thought, and protracted negotiations. It is also just to acknowledge the willing and zealous services of all the officers in carrying out these arrangements. Their labours have been considerably increased thereby in superintending and providing for a large force at work at some distance from the company's establishment, and in rendering the accounts of the same to the Provincial Government.

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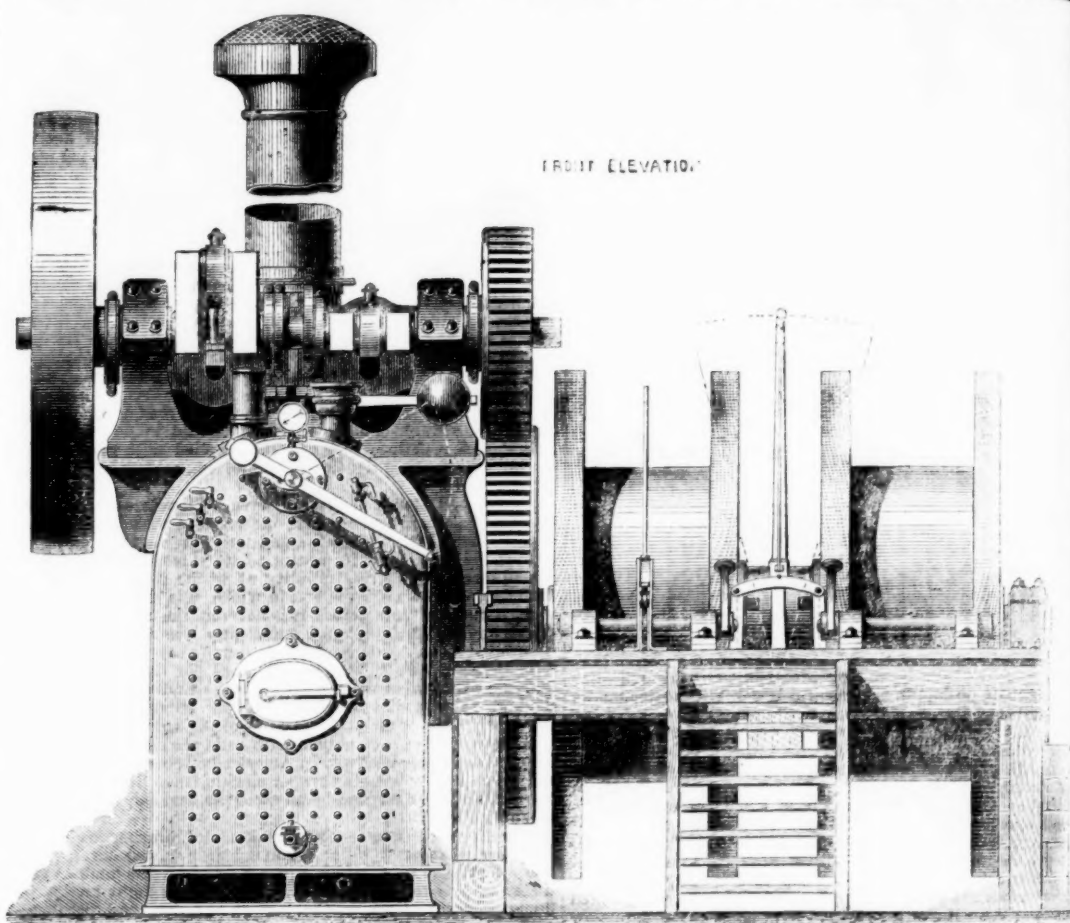
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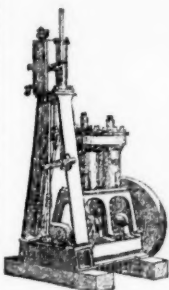
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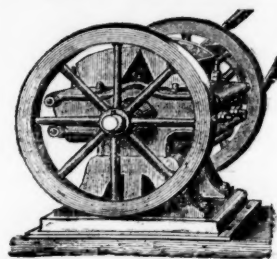
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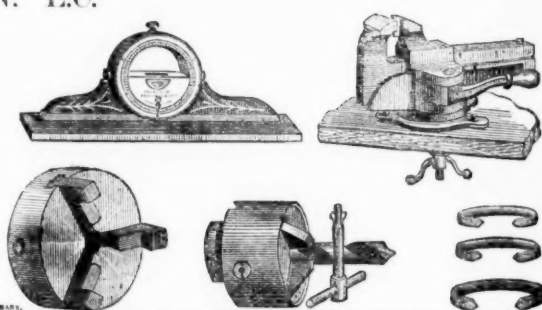
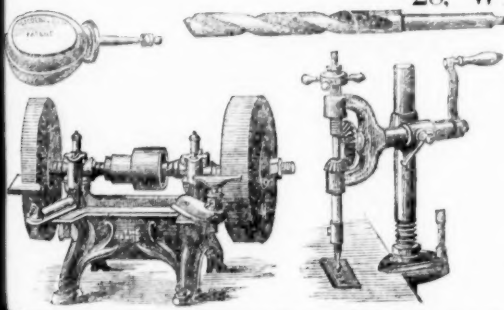
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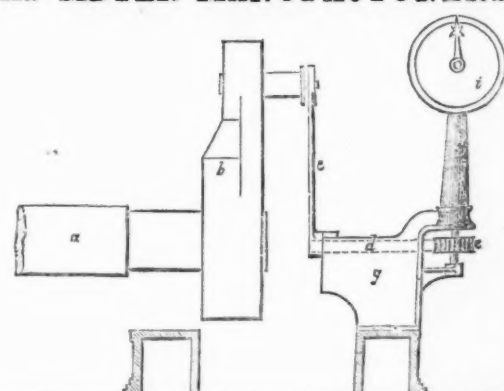


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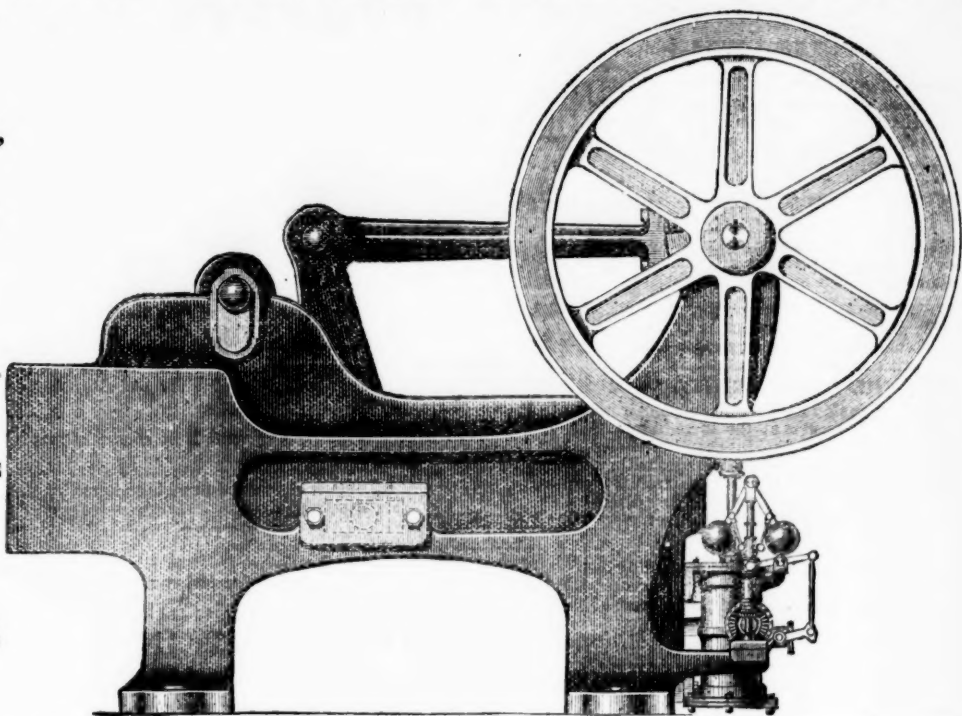
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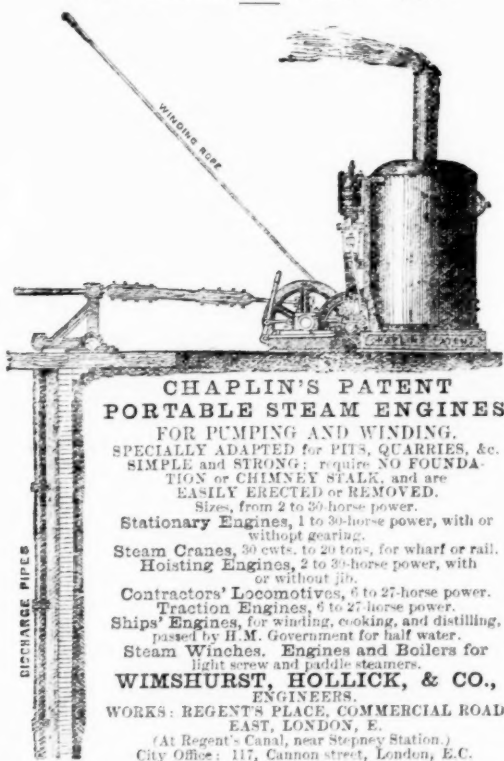
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